



DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Part 1915

[Docket No. OSHA–2013–0022]

RIN 1218-AA68

Fall Protection in Shipyard Employment

AGENCY: Occupational Safety and Health Administration (OSHA), Department of Labor.

ACTION: Request for information (RFI).

SUMMARY: OSHA is considering revising and updating its safety standards that address access and egress (including stairways and ladders), fall and falling object protection, and scaffolds in shipbuilding, ship repair, shipbreaking, and other shipyard related employment (collectively referred to as “shipyard employment” in this document). The Agency has not updated these standards since adopting them in 1971. To assist with this determination, OSHA requests comment, information and data on a number of issues, including: the workplace hazards these standards address, particularly fall hazards; the current practices employers in shipyard employment use to protect workers from those hazards; any advances in technology since OSHA adopted the standards in subpart E; and the revisions and updates to subpart E that stakeholders recommend. OSHA will use the information received in response to this RFI to determine what action, if any, it may take.

DATES: Submit comments and additional material on or before [INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Submit comments and additional material using one of the following methods:

Electronically: You may submit comments and attachments electronically via the Federal eRulemaking Portal at <http://www.regulations.gov>. Follow the instructions online for making electronic submissions.

Facsimile (FAX): You may fax submissions if they do not exceed 10 pages, including attachments, to the OSHA Docket Office at (202) 693–1648.

Regular mail, express mail, hand (courier) delivery, or messenger service: You may submit comments and any additional material (e.g., studies, journal articles) to the OSHA Docket Office, Docket No. OSHA–2013–0022, Technical Data Center, Room N–2625, U.S. Department of Labor, 200 Constitution Avenue NW., Washington, DC 20210; telephone: (202) 693–2350 (TDY number (877) 889–5627). Please note that security procedures may result in a significant delay in receiving comments and other written materials submitted by regular mail. Contact the OSHA Docket Office for information about security procedures concerning delivery of materials by express mail, hand delivery, or messenger service. The hours of operation for the OSHA Docket Office are 8:15 a.m. – 4:45 p.m., e.t.

Instructions: All submissions received must include the Agency name and the docket number for this document (Docket No. OSHA–2013–0022). OSHA places all submissions, including any personal information provided, in the docket without change and this information may be available online at <http://www.regulations.gov>. Therefore, the Agency cautions individuals about submitting information they do not want made publicly available or submitting comments that contain personal or personally-

identifiable information (about themselves or others) such as Social Security numbers and birth dates.

Docket: To read or download submissions and other material in the docket, go to <http://www.regulations.gov>. While the Agency lists all documents in the <http://www.regulations.gov> index, some information (e.g., copyrighted material) is not publicly available to read or download through this website. All submissions, including copyrighted material, are accessible at the OSHA Docket Office. Contact the OSHA Docket Office for assistance in locating docket submissions.

Electronic copies of this Federal Register document are available at <http://www.regulations.gov>. This document, as well as news releases and other relevant information, are available at OSHA's webpage at <http://www.osha.gov>.

FOR FURTHER INFORMATION CONTACT:

Press inquiries: Frank Meilinger, Director, OSHA Office of Communications, Room N-3647, U.S. Department of Labor, 200 Constitution Avenue NW., Washington, DC 20210; telephone: (202) 693-1999; email: meilinger.francis2@dol.gov.

General and technical information: Amy Wangdahl, Director, Office of Maritime and Agriculture, OSHA Directorate of Standards and Guidance, Room N-3609, U.S. Department of Labor, 200 Constitution Avenue NW., Washington, DC 20210; telephone: (202) 693-2222; fax: (202) 693-1663; email: wangdahl.amy@dol.gov.

SUPPLEMENTARY INFORMATION:

References and exhibits. In this Federal Register document OSHA references materials in Docket No. OSHA-2013-0022. OSHA has also incorporated in this docket materials from the following dockets:

- Docket Nos. S-205, S-205A and S-205B, which is the record from the scaffolds in construction rulemaking (29 CFR part 1926, subpart L);
- Docket No. S-041, specifically the scaffold-related materials pertaining to the 1990 proposed rule on walking-working surfaces in general industry; and
- Docket No. S-047A, the materials from the limited reopening of the record of the Safety Standards for Scaffolds Used in Shipyard Employment rulemaking (29 CFR part 1915, subpart N).

References to materials incorporated into this RFI docket are given as “Ex.” followed by the last sequence of numbers in the document identification (ID) number in Docket No. OSHA-2013-0022. For example, “Ex. 100” refers to document ID number OSHA-2013-0022-0100 in this RFI docket.

In addition, OSHA incorporates by reference the following dockets:

- Docket No. OSHA-2007-0072, which is the record from the general industry Walking-Working Surfaces and Personal Protective Equipment (Fall Protection Systems) rulemaking (hereafter referred to as the “proposed general industry Walking-Working Surfaces rule” or the “Proposed Rule” in this document) (29 CFR part 1910, subparts D and I);
- Docket No. OSHA-2010-0001, which is the record from the 2010 meetings of the Maritime Advisory Committee on Occupational Safety and Health (MACOSH); and
- Docket No. OSHA-2011-0007, which is the record from the 2011 meetings of MACOSH.

In this RFI, referenced materials in those three dockets are given as “Ex.” followed by the full document identification (ID) number for the document in that docket. For example, “Ex. OSHA-2011-0007-0003” refers to minutes of the July 14, 2010, MACOSH meeting in Docket No. OSHA-2011-0007.

Table of Contents

- I. Background
 - A. Introduction
 - B. Regulatory History
- II. Request for Information, Data, and Comments
 - A. General Issues
 - B. Subpart E – Stairways, Ladders and Access and Egress
 - C. Subpart M – Fall and Falling Object Protection
 - D. Subpart N – Scaffolds
 - E. Outdated Requirements, Technological Advances and Industry Best Practices
- III. Economic Impacts
- IV. Public Participation
- Authority and Signature

I. Background

A. Introduction

OSHA is considering revising and updating its shipyard employment Scaffolds, Ladders and Other Working Surfaces standards (29 CFR part 1915, subpart E). OSHA adopted these standards in 1971, pursuant to section 6(a) of the Occupational Safety and Health Act of 1970 (OSH Act) (29 U.S.C. 651, 655),¹ and they have not been updated since. OSHA believes that revising subpart E may be needed for several reasons.

First, workplace slips, trips and falls, particularly falls to a lower level, continue to be a major cause of worker fatalities and injuries in shipyard employment. Bureau of Labor Statistics (BLS) Census of Fatal Occupational Injuries data from 1992 - 2014

¹ Section 6(a) allowed OSHA, during the first two years after the OSH Act became effective, to promulgate as an occupational safety and health standard any national consensus standard or any established Federal standard, such as the Longshore and Harbor Workers’ Compensation Act (33 U.S.C. 941).

indicate that on average 40 percent of all fatal occupational incidents in shipyard employment resulted from falls to a lower level. Also, OSHA Integrated Management Information System (IMIS) data indicate 32 falls resulting in death or hospitalization occurred in shipbuilding and ship repair (NAICS 336611) between 2002 and 2014. Of those falls, 24 (80%) resulted in a fatality. The IMIS data shows the falls were from various workplace surfaces, including scaffolds, ladders, stairways, platforms, drydocks, and ship decks. OSHA also notes that nine struck by falling object injuries occurred in shipyard employment during that same period, seven (78%) of which resulted in death.

According to BLS occupational injury data from 2003 - 2013, an average of 642 slip, trip and fall injuries involving days away from work (DAFW) occurred annually in shipyard employment. This accounts for approximately 22 percent of all DAFW injuries in this industry. Slips, trips and falls are the third leading cause of DAFW injuries in shipyard employment, behind overexertion and contact with equipment.

Second, the standards in subpart E are not comprehensive in their coverage of slip, trip and fall hazards in shipyard employment and are supplemented by applicable general industry standards (29 CFR part 1910, subparts D, E and I) to fill the gaps in subpart E's coverage of those hazards (29 CFR 1910.5(c)(2)).² However, this approach requires that shipyard employers look in both parts 1915 and 1910 to find the standards on fall and falling object protection, scaffolding and access/egress that apply to shipyard employment. Stakeholders in shipyard employment and MACOSH have urged OSHA repeatedly to consolidate all standards applicable to shipyard employment into part 1915

² Additionally, construction standards apply when shipyard workers perform construction activities.

so they only have to follow one set of standards (53 FR 48092 (11/29/1988); Exs. OSHA-2011-0007-0003; OSHA-2010-0001-0034).

Third, the standards in subpart E are outdated and do not reflect advances in technology or industry best practices developed since OSHA adopted subpart E.

Comments received from the U.S. Navy and MACOSH members (Exs. OSHA-2011-0007-0003; OSHA-2010-0001-0034), as well as other stakeholders, expressed similar issues with subpart E and its need for revision.

To assist OSHA in determining whether to initiate rulemaking, the Agency requests comment on revising and updating subpart E, including information on:

- Revising and updating shipyard employment standards that address slip, trip and fall hazards;
- Increasing consistency in the shipyard employment, general industry and construction standards that address fall and falling object protection, scaffolding and access/egress;
- Identifying technological advances, industry best practices, and outdated provisions;
- Consolidating general industry standards into part 1915; and
- Reorganizing subpart E standards into three subparts (subparts E, M, and N).

B. Regulatory History

As mentioned, in May 1971 OSHA adopted established Federal standards issued under section 41 of the Longshore and Harbor Workers' Compensation Act (33 U.S.C. 941) as standards applicable to ship repairing, shipbuilding, and shipbreaking. At that

time, OSHA also adopted other established Federal standards and national consensus standards as general industry and construction standards. These standards cover hazards and working conditions that shipyard employment standards did not address, but nevertheless often applied to shipyard employment.

On April 20, 1982, OSHA consolidated its ship repairing, shipbuilding, and shipbreaking standards into one part (part 1915) titled "Occupational Safety and Health Standards for Shipyard Employment" (47 FR 16984). The consolidation eliminated duplicate and overlapping provisions. It did not alter substantive requirements or affect the applicability of general industry standards to shipyard hazards and working conditions not specifically addressed in part 1915 shipyard employment standards (29 CFR 1910.5(c)(2)). General industry standards continue to apply to shipyard employment to fill gaps when part 1915 standards do not address a particular hazard or working condition.

Thereafter, OSHA proposed to revise subpart E in November 1988 (53 FR 48130 (11/29/1988)), and reopened the rulemaking record in April 1994 (59 FR 17290 (4/12/1994)) to request additional information on the 1988 proposal. The intent of the rulemaking was to update the shipyard employment standards and consolidate OSHA access/egress, fall and falling object protection, and scaffold standards applicable to shipyard employment into subpart E, so employers would have a single set of standards to follow. However, the proposal and record reopening received only a few comments, and due to other Agency priorities, OSHA did not continue the rulemaking.

In 2010, OSHA proposed to revise and update its general industry Walking-Working Surfaces standards (29 CFR part 1910, subparts D and I), which, like the

subpart E standards, were adopted in 1971 and had not been updated (75 FR 28862 (05/24/2010)). The Proposed Rule incorporated provisions from updated national consensus standards and OSHA construction standards, particularly the scaffold requirements. One of the purposes of the rulemaking was to make the general industry standards more consistent with the construction Stairways and Ladders (subpart X), Fall Protection (subpart M) and Scaffolds (subpart L) standards, which OSHA revised and updated in 1990, 1994 and 1996, respectively (55 FR 47687 (11/14/1990); 59 FR 40730 (8/9/1994); 61 FR 46104 (8/30/1996)). OSHA held an informal public hearing on the general industry Proposed Rule in January 2011, and is in the process of completing the final rule.

II. Request for Information, Data, and Comments

OSHA requests information, comments and data to determine whether there is a need for rulemaking to revise and update subpart E. Specifically, OSHA requests comment on incorporating into subpart E provisions from the proposed general industry Walking-Working Surfaces rule. Requirements in the Proposed Rule are noted below. OSHA also requests comment on consolidating existing general industry standards on access/egress and fall and falling object protection into subpart E. Finally, OSHA requests comment on regrouping subpart E standards into three separate subparts (subparts E, M, and N). OSHA will carefully review and evaluate the information, data, and comments received in response to this Federal Register document to determine what action, if any, may be needed.

A. General Issues

1. Fatalities and injuries. As mentioned, workplace slips, trips and falls, especially falls to a lower level, are a significant cause of worker fatalities and injuries in shipyard employment. OSHA requests information and data on slip, trip and fall injuries and fatalities at your establishment during the past 5 years. What percentage of injuries and fatalities at your establishment do these incidents represent? Please explain where the injuries and fatalities resulting from falls to a lower level occurred (e.g., ladders, scaffolds, vessel sections, docks), the circumstances involved, and what fall protection (e.g., guardrails, personal fall arrest system), if any, was used.

2. Consolidation. As mentioned, OSHA is considering consolidating existing general industry access/egress, fall and falling object protection standards into part 1915 so that employers may have these standards together in one part of the Code of Federal Regulations.³

OSHA believes that consolidating requirements from general industry into a single set of shipyard employment standards would make it easier for employers and workers to understand and follow applicable requirements. As OSHA explained in its 1988 proposal, having a single set of shipyard employment standards would eliminate the possibility that employers would interpret the applicability of general industry standards in different ways and ensure that employers and workers know what requirements apply to shipyard employment activities (53 FR 48092). In addition, consolidating those applicable standards into part 1915 would utilize an organizational approach that already

³ Previous rulemakings where OSHA has consolidated general industry and construction standards into part 1915 include: (1) Subpart B--Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment (59 FR 37816 (7/25/1994)); (2) Subpart I--Personal Protective Equipment in Shipyard Employment (61 FR 26322 (5/24/1996)); and (3) Subpart P--Fire Protection in Shipyard Employment (69 FR 55702 (10/15/ 2004)).

is familiar to shipyard employment employers and workers (53 FR 48092-93). For example, subpart E addresses access/egress requirements for shipyard employment, while applicable general industry access/egress standards are in two different subparts of part 1910 (subparts D and E).

To what extent will consolidation of existing general industry access/egress and fall and falling object protection standards into part 1915 make compliance easier for your establishment and shipyard employment employers and workers to understand and follow? Discussion of the consolidation of specific standards into part 1915 is in sections II-B, II-C and II-D.

3. Reorganization of standards. OSHA is considering reorganizing the standards in subpart E into three subparts:

- Subpart E - Stairways, Ladders and Access/Egress;
- Subpart M - Fall and Falling Object Protection; and
- Subpart N - Scaffolds.

The Agency believes grouping the requirements into separate subparts may make it easier for employers and workers to understand and follow the standards that apply to shipyard employment.

OSHA invites comment on an option of reorganizing subpart E into three subparts. Do the three subparts that OSHA is considering provide for a more understandable and logical structure? If not, what organization would you recommend? Please describe any unique or special circumstances that OSHA may need to take into account when considering the reorganization of subpart E.

4. Scope. OSHA is considering combining the individual scope provisions contained in each section of subpart E into one scope section for each of subparts E, M, and N. OSHA has done this when revising and updating other subparts of part 1915.⁴ The existing scope provisions in subpart E specify the provisions in each section that apply to each sector of shipyard employment (i.e. ship repairing, shipbuilding, shipbreaking). Combining the scope provisions would eliminate duplication, provide clarity about the standards' application, and be consistent with other subparts of part 1915 that OSHA has revised.

OSHA requests comment on an option of combining the scope provisions currently spread throughout subpart E's various sections into one section – dedicated to “scope” in subparts E, M and N, respectively. Would this combination aid employers and employees in understanding the standard's applicability, or cause confusion?

5. Definitions. The proposed general industry Walking-Working Surfaces rule defines the key terms in the proposed standards (proposed §§1910.21(b), 1910.140(b)). Those definitions are consistent with the definitions in the corresponding construction standards (§§1926.500(b), 1926.1050(b)). The construction scaffold standards also defines key terms (§1926.450(b)). Subpart E, by contrast, does not define any terms.

OSHA requests comment about an option of adopting into part 1915 the proposed general industry Walking-Working Surfaces rule definitions, and the construction scaffold definitions. Please discuss whether there are other terms pertaining to access/egress, fall and falling object protection, and scaffolds that OSHA should define and how OSHA should define them.

⁴ See for example, General Working Conditions (29 CFR part 1915, subpart F).

B. Subpart E - Stairways, Ladders and Access and Egress

As mentioned, the provisions in part 1915 are not comprehensive in their coverage of access/egress hazards in shipyard employment. Part 1915 contains some requirements that pertain to those hazards (e.g., subpart E; §1915.81); however, the part does not provide complete coverage and must be supplemented by general industry provisions. For example, subpart E contains provisions on ladders and stairways, but they are limited or cover only certain types of ladders and stairways.

1. General Revisions

a. Walking-working surface strength. The proposed general industry Walking-Working Surfaces rule requires that employers ensure walking-working surfaces can support the “maximum intended load” for that surface (proposed §1910.22(b)), which OSHA defines as the total load (weight and force of all employees, equipment, vehicles, tools, materials, and other loads the employer “reasonably anticipates” to be applied to a walking-working surfaces at any one time (proposed §1910.21(b)). Similarly, the construction fall protection standard requires that employers determine whether walking-working surfaces have the “strength and structural integrity” to support workers safely (§1926.501(a)(2)). Part 1915 does not contain similar requirements.

OSHA requests comment about an option of adopting the Proposed Rule’s strength requirements into part 1915. Please discuss what practices and procedures your establishment uses (or employers should use) to ensure that walking-working surfaces (e.g., floors, ladders, elevated work areas) are capable of supporting the maximum load intended for that surface. What criteria, factors and methods does your establishment use (or should employers use) to determine whether a walking-working surface is capable of

supporting the weight and force of the workers, tools and materials reasonably anticipated to be applied to it?

b. Inspection of walking-working surfaces. The proposed general industry Walking-Working surface rule requires that employers inspect walking-working surfaces regularly and periodically to ensure surfaces are maintained in a safe condition and correct or guard hazardous conditions to prevent workers from being injured or killed (proposed §1910.22(d)(1) and (2)). If a repair involves the structural integrity of the walking-working surface, a qualified⁵ person must perform or supervise the repair (proposed §1910.22(d)(3)). While §1915.81 requires good housekeeping in walkways and working surfaces, no requirements in part 1915 specifically address regular or periodic inspections of all walking-working surfaces or indicate who must perform repairs or correct deficiencies. Part 1915 also does not address the qualifications of persons who make structural repairs to walking-working surfaces.

OSHA requests comment on an option of adopting the Proposed Rule's inspection and repair requirements into part 1915. What inspection practices and procedures does your establishment have (or should employers implement) to ensure walking-working surfaces are maintained in a safe condition? How frequently does your establishment inspect (or should employers inspect) walking-working surfaces? What does your establishment do (or should employers do) when an inspection identifies hazardous conditions that need correction, including corrections that involve the structural integrity

⁵ The proposed rule defines a "qualified" person as a person who, by possession of a recognized degree, certificate or professional standing, or who by extensive knowledge, training, and experience has successfully demonstrated the ability to solve or resolve problems related to the subject matter, the work, or the project (proposed §1910.21(b)).

of the walking-working surface? Who conducts inspections and performs or oversees repairs at your establishment and what qualifications do (or should) these workers have?

c. Access/egress. The proposed general industry Walking-Working Surfaces rule requires that employers ensure workers have and use safe means of access to and from walking-working surfaces (proposed §1910.22(c)). The existing general industry means of egress standards (29 CFR part 1910, subpart E - Exit Routes, Emergency Action Plans, and Fire Prevention Plans) require that employers ensure workers have adequate and safe exit routes for evacuation during emergencies (§§1910.34 – 1910.37). However, the existing general industry means of egress standards do not apply to “mobile workplaces” and specifically exclude vessels and vehicles (§1910.34(a)). While part 1915 contains specific access requirements for vessels, dry docks, marine railways, cargo and confined spaces (§§1915.74 - 1915.76), it has no general access/egress requirements for other walking-working surfaces.

OSHA requests comment about an option of adopting the Proposed Rule and the existing general industry means of egress standards into part 1915. OSHA also requests comment on extending the general industry means of egress standards to vessels and vessel sections. What practices and procedures does your establishment have (or should employers implement) to ensure workers have a safe means of access to, and egress from walking-working surfaces? Please discuss whether your exit route practices and procedures include vessels/vessel sections? Please explain in what situations or circumstances, if any, it would not be possible to implement the general industry means of egress provisions on vessels and vessel sections.

d. Emergency action and fire prevention plans. The Fire Protection in Shipyard Employment standards (29 CFR part 1915, subpart P) require that employers develop and implement a written fire safety plan that covers all the actions employers must take to ensure employee safety in the event of a fire on shore or on vessels (§1915.502). However, these fire prevention requirements do not address other types of emergencies, such as toxic chemical releases and weather-related emergencies (e.g., hurricanes, tornadoes, blizzards, flash floods). Moreover, although the general industry standards may require that on-shore shipyard employment workplaces have an emergency action plan that covers other emergencies (e.g., §1910.120 – Hazardous Waste Operations), they do not apply to vessels (§1910.34(a)). Section 1910.38 sets out the requirements of such plans when they are required. The plans must include procedures for reporting emergencies, evacuating workers, operating critical plant operations before evacuation, accounting for evacuated workers, and performing rescue or medical duties (§1910.38(b)).

OSHA requests comment on an option of adopting into part 1915 the general industry requirements for emergency action plans and extending their coverage to vessels. Does your establishment have (or should employers have) emergency action plans and in what situations and locations (e.g., vessels) do those plans apply? Please describe any unique or special circumstances that OSHA may need to take into account when considering applying emergency action plans to vessel/vessel sections. To what emergencies, other than fire, do your emergency action plans (or should emergency action plans) apply (e.g., environmental, hazardous chemical spills, radiation release, terrorism)?

2. Specific Revisions

a. Dockboards. The existing general industry standards contain requirements on the use and design of dockboards (§1910.30(a)). The proposed general industry Walking-Working Surfaces rule updates and expands on those provisions (proposed §1910.26). The Proposed Rule defines dockboards as a portable or fixed device that spans a gap or compensates for a difference in elevation between a loading platform and a transport vehicle (proposed §1910.21(b)). Dockboards, also referred to as bridge plates or dock levelers, primarily are used to transfer items from one area to another, such as from a transport vehicle or vessel to a dock or loading area. The Proposed Rule requires that dockboards be designed, constructed, and maintained to prevent transfer vehicles from running off the dockboard edge (proposed §1910.26(b)). In addition, the Proposed Rule (29 CFR part 1910, subparts D and I) requires that portable dockboards be secured or have substantial contact or overlap to prevent the dockboard from slipping (proposed §1910.26).

OSHA requests comment on an option of adopting the Proposed Rule's dockboard requirements into 1915. Does your establishment use dockboards to move or transfer items from vehicles and/or vessels/vessel sections. If so, what type of dockboards does your establishment use and in what operations and locations? What practices and procedures does your establishment follow to ensure dockboards are safely used and maintained?

b. Ladders. Part 1915 contains only a few requirements on ladders, and those primarily address portable ladders (§1915.72). The provisions are not comprehensive and do not include specific requirements for fixed ladders and mobile ladder stands and

platforms, therefore, they must be supplemented by general industry standards. The proposed general industry Walking-Working Surfaces rule includes general requirements that apply to all ladders and specific requirements for portable ladders, fixed ladders⁶, and mobile ladder stands and platforms (proposed §1910.23). These provisions revise and update the existing general industry ladder requirements (§§1910.24 through 1910.27).

OSHA requests comment on an option of adopting the Proposed Rule's ladder requirements into part 1915. OSHA requests comment on the types of ladders (e.g., portable, fixed, individual rung ladders) your establishment uses and in what operations and locations. To what extent does your establishment use fixed ladders, including individual rung ladders, in onshore facilities, on vessels/vessel sections, in tanks, and on docks or drydocks? Does your establishment use portable ladders and mobile ladder stands and in what locations and operations?

c. Inspection of ladders. Part 1915 does not contain any ladder inspection requirements. The proposed general industry Walking-Working Surfaces rule requires that all ladders be inspected before being used during a work shift to identify visible defects that could injure workers and tag and remove any defective ladder from service until the employer repairs or replaces it (proposed §1910.23(b)(9) and (10)).

OSHA requests comment on an option of adopting the Proposed Rule's ladder inspection requirements into part 1915. What inspection practices and procedures does your establishment have (or should employers implement) to ensure that ladders are safe to use? How frequently does your establishment inspect (or should employers inspect)

⁶ The Proposed Rule defines "fixed ladder" as a ladder that is permanently attached to a building, structure or equipment (proposed §1910.21(b)). The proposed definition includes fixed individual rung ladders.

ladders? What does your establishment do (or should employers do) when an inspection identifies visible defects in ladders?

d. Ladder rung spacing. Part 1915 standards only includes rung spacing requirements for portable wood cleated ladders, which must be uniformly spaced not more than 12 inches apart (§1915.72(b)(7) and (c)(1)). As such, the general industry standards on fixed ladders and mobile ladder stand platform rung spacing must supplement the requirements of part 1915. The proposed general industry Walking-Working rule, like the construction ladder standard, requires that ladder rungs, steps, and cleats be spaced not less than 10 inches and not more than 14 inches apart (proposed §1910.23(b)(2)).

OSHA requests comment on an option of adopting the Proposed Rule's requirements on ladder rung spacing into part 1915. What is the rung spacing on ladders that your establishment uses? What is the rung spacing on fixed ladders and mobile ladder stand platforms that your establishment uses? OSHA also requests comment on an option of adopting the proposed general industry ladder rung spacing requirements into part 1915. Please discuss whether the flexibility of the Proposed Rule would make compliance easier and less expensive for shipyard employment employers.

e. Carrying objects while climbing ladders. Carrying objects while climbing ladders is a cause of a number of fall fatalities and injuries for general industry, construction and shipyard employment. In shipyard employment, for example:

- On May 13, 2010, a worker exiting a barge died when he lost his grip and fell off a fixed ladder as he was trying to hand off a broom to another worker and struck his head on a pipe support 11 feet below; and

- On April 11, 2002, a worker died when he slipped and fell off a ladder while carrying a paint can and brush, striking his head on the deck 20 feet below.

Part 1915 does not contain any requirements to prevent workers from falling off ladders while carrying objects. The proposed general industry Walking-Working Surfaces rule, like the relevant construction ladder standard (§1926.1053(b)(21) and (22)), requires that workers climbing ladders maintain a grasp on it with at least one hand at all times and not carry any load or object that could cause them to lose balance and fall off the ladder (proposed §1910.23(b)(12) and (13)).

OSHA requests comment on an option of adopting into part 1915 the Proposed Rule's requirements on carrying objects while climbing ladders. What practices and procedures does your establishment have (or should employers implement) to prevent workers from falling off ladders while carrying objects? What tools and equipment (e.g., tool belts, backpacks, rope lifts) does your establishment use (or should employers have) to move items to elevated work areas? Have any workers at your establishment fallen off a ladder when they were carrying a load or object? If yes, please describe the incident and what practices or changes your establishment implemented in response to the incident.

f. Stairways. The proposed general industry Walking-Working Surfaces rule includes requirements for standard stairs as well as for less-commonly used stairways

such as spiral stairs, ship stairs⁷ and alternating tread-type stairs⁸ (proposed §1910.25) (see Figures 1 and 2).

OSHA requests comment on an option of adopting the Proposed Rule's requirements on spiral stairs, ship stairs and alternating tread-type stairs into part 1915. OSHA also requests comment on the types of stairways your establishment uses in different locations (e.g., in onshore facilities, on drydocks, on vessels/vessel sections). To what extent and in what locations does your establishment use spiral stairs, ship stairs and alternating tread-type stairs? What types of stairways does your establishment use in locations where space is limited?



Figure 1 – Ship Stairs⁹

⁷ The proposed Walking-Working Surfaces rule defines “ship stairs” as stairways that are equipped with treads, has a slope between 50 to 70 degrees from horizontal and open risers (proposed §1910.21(b)).

⁸ The proposed Walking-Working Surfaces rule defines “alternating tread-type stairs” as a series of steps usually attached to a center support in an alternating manner so that a user normally does not have both feet on the same level (proposed §1910.21(b)).

⁹ Figure 1, which provides an example of ship stairs, was obtained from OSHA’s proposed rule on Walking-Working Surfaces (75 FR 29139 (5/24/2010)).

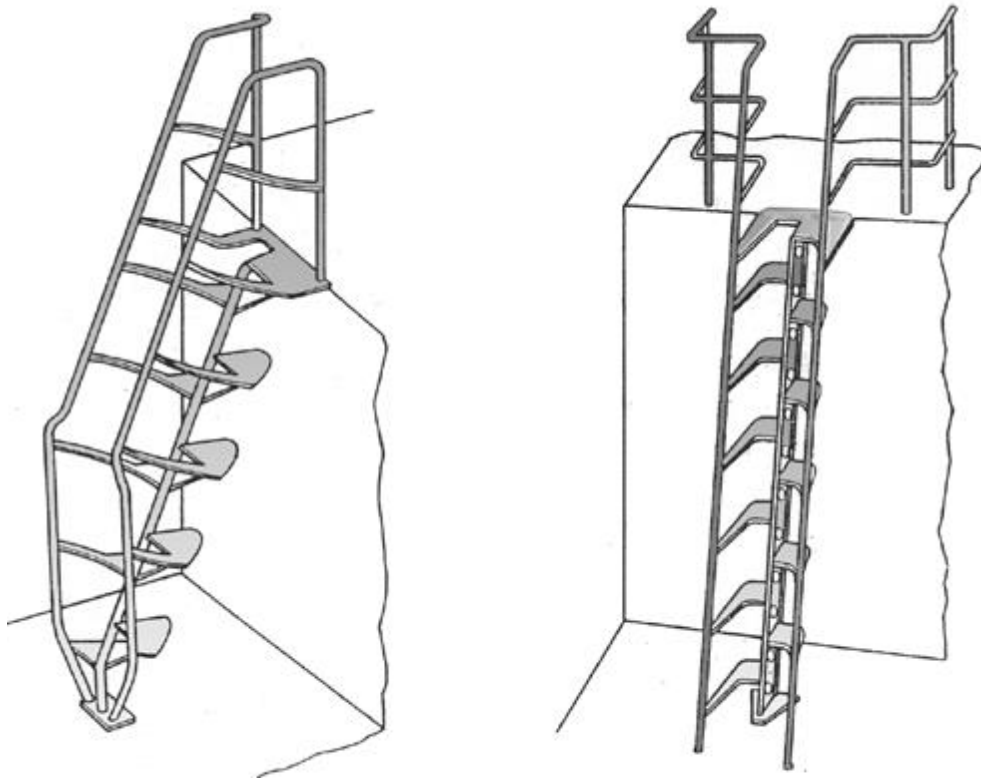


Figure 2 – Alternating Tread-Type Stairs¹⁰

C. Subpart M - Fall and Falling Object Protection

As mentioned, falls to a lower level and being hit by falling objects are major causes of worker fatalities in shipyard employment. Examples of fatal fall and falling object incidents in shipyard employment include:

- On June 30, 2004, a maintenance worker was killed when he fell 70 feet through a lubbers' hole, to the main deck. Although the worker was wearing a full body harness, he was not tied off to an anchorage;

¹⁰ Figure 2, which provides an example of alternating tread-type stairs, was obtained from a fact sheet from the Oregon Occupational Safety and Health Administration addressing Ship's Ladders and Alternating Tread Stairs (OR-OSHA (5/09) FS-34).

- On March 10, 2005, a worker painting a ship died when he fell approximately 57 feet from the open edge when a turnbuckle on a wire rope in the guardrail loosened;
- On February 14, 2008, an employee working on an aircraft carrier ventilation system fell into the water and drowned when he was trying to remove a cover from a plenum. The employer had not provided any fall protection; and
- On November 30, 2010, an employee was killed when a metal frame fell from above and struck him.

OSHA believes that many shipyard employment fatalities and injuries could have been prevented by employers providing and using fall and falling object protection, implementing inspection procedures and providing training.

1. General Revisions

a. Fall protection options. OSHA is considering an option of adopting the fall protection requirements in proposed general industry Walking-Working Surfaces rule into part 1915. The Proposed Rule, like the construction fall protection standards, allow employers to select from among accepted conventional fall protection options (i.e., guardrails systems, safety net systems, personal fall protection systems) they believe would work best in the particular situation (§1926.501(b)(1), proposed §1910.28(b)(1)).

OSHA requests comment about an option of adopting the Proposed Rule's fall protection options into part 1915. OSHA also requests comment on what fall protection systems your establishment uses and in what work locations and operations. To what extent would allowing employers to use the fall protection options in the Proposed Rule make it easier and less expensive for your establishment to protect workers from falls?

b. Inspection of fall protection systems. Part 1915 does not contain any requirements to inspect fall protection equipment and systems. The proposed general industry Walking-Working Surfaces rule requires that walking-working surfaces, including fall protection equipment, be inspected regularly and as necessary to ensure they are in safe condition (proposed §1910.22(d)(1)). Specifically, the Proposed Rule, like the construction fall protection standards (§1926.502(d)(21)), requires that employers ensure personal fall protection systems be inspected before initial use in each work shift (proposed §1910.140(c)(18)) and safety net systems be inspected at least weekly and after any occurrence that could affect the system's integrity (§1926.502(c)(5), proposed §1910.29(c)). The Proposed Rule also requires that walking-working surfaces, including guardrail systems and covers, be inspected regularly and periodically to ensure they are in safe condition (proposed §1910.22(d)(1)).

OSHA requests comment about an option of adopting the Proposed Rule's fall protection inspection requirements into part 1915. What practices and procedures does your establishment use (or should employers implement) for inspecting fall protection? When and how frequently does your establishment inspect (or should employers inspect) fall protection equipment, especially personal fall protection systems and safety net systems? What action does your establishment take (or should employers take) if an inspection reveals any damage or deterioration of the fall protection equipment?

c. Training. Part 1915 requires that workers who use personal fall protection systems be trained by employers (§1915.152(e)); however, part 1915 does not require that employers train workers who use other types of fall protection (e.g., guardrail systems, ladder-safety systems) or other equipment that involves protection from falls.

The proposed general industry Walking-Working Surfaces rule requires that employers train workers who use personal fall protection systems about fall hazards; procedures to minimize them; and the correct procedures for installing/dismantling, inspecting, using, storing and caring for /maintaining personal fall protection systems (proposed §1910.30(a)). The Proposed Rule also requires that employers train workers in the proper use, care, inspection and storage of equipment subpart D covers, including ladders, dockboards, rope descent systems (RDS), and fall protection (proposed §1910.30(b)).

OSHA requests comment about an option of adopting the Proposed Rule's training requirements into part 1915. What training does your establishment provide (or should employers provide) on equipment such as fall protection, ladders, and RDS? Does your establishment provide (or should employers provide) retraining and, if so, when or in what circumstances? Who provides the training and what are their qualifications? What measures does your establishment use (or should employers use) to ensure that workers, especially non-English speaking workers, understand the training?

2. Specific Revisions

a. Guardrail heights. In part 1915, requirements for minimum guardrail system heights vary depending on what area is being guarded. For example:

- Guardrails of at least 30 inches are required for systems installed around flush manholes and other small openings of comparable size located in decks and other walking or working surfaces aboard vessels and vessel components (§1915.73(b));
- Guardrails of at least 33 inches are required for each side of gangways and turntables, if used (§1915.74(a)(2));

- Guardrails ranging from 36 inches to 42 inches are required for systems installed around open hatches (not protected by coamings to a height of 24 inches) and other large openings (§1915.73(c));
- Guardrails ranging from 42 to 45 inches are required for unguarded edges of decks, platforms and similar flat surfaces more than 5 feet above a solid surface and for catwalks on stiles of marine railways (§§1915.73(d) and 1915.75(g));
- Guardrails of approximately 42 inches are required for systems installed on gangways and ramps provided between floating drydocks and the pier or bulkhead, edges of wing walls on graving docks, and where employees are working on the floor of floating drydocks and exposed to the hazard of falling into the water (§1915.75(b) – (e)).

By contrast, the existing construction standards and the proposed general industry Walking-Working Surfaces rule establish one uniform height requirement for all guardrails: 42 inches, plus or minus 3 inches¹¹ (§1926.502(b)(1) and proposed §1910.29(b)(1), respectively).

OSHA requests comment about an option of adopting the Proposed Rule's uniform guardrail height requirement into part 1915. Should all guardrail systems used in shipyard employment meet one height requirement and, if so, what height? If not, please explain why different guardrail heights are necessary or more effective and what factors or work location issues support varying heights. If OSHA adopted a uniform guardrail height requirement into part 1915, how many or what percentage of guardrails would your establishment need to replace?

¹¹ The construction and proposed general industry standards also allow guardrails to exceed 45 inches if the guardrail system meets all of the other guardrail criteria (§1926.502(b)(1), proposed §1910.29(b)(1)).

b. Designated areas, warning line systems and controlled access zones. Part 1915 does not include any provisions permitting employers to use alternative measures to protect workers from falling off elevated surfaces. In certain situations, the construction standard and the proposed general industry Walking-Working Surfaces rule allow employees to work in certain elevated areas without the use of guardrail systems, personal fall protection systems, or safety net systems. For example, the construction fall protection standard allows employers to use a warning line system¹² for roofing work on low-slope roofs (§1926.501(b)(10)). In addition, the construction standard permits employers to use a controlled access zone (CAZs) (i.e., an area where employees can perform leading edge or overhead bricklaying and related work) without conventional fall protection when access to that zone is controlled (§1926.501(b)(2)(ii) and (b)(9)).

The Proposed Rule allows the use of designated areas,¹³ similar to a warning line system, to perform temporary work at least 6 feet from the unprotected side or edge on a low-slope (i.e., a slope of less than 10 degrees) walking-working surface (proposed §§1910.28 and 1910.29(d)). Part 1915 does not contain similar provisions and does not include alternatives to guardrail or personal fall protection systems when employees work a certain minimum distance from an unprotected edge.

OSHA requests comment about an option of adopting the Proposed Rule's requirements that address alternatives to guardrail or personal fall protection systems (i.e., designated areas, warning line systems, CAZs) into part 1915. Please discuss

¹² The construction fall protection standard defines a "warning line system" as a barrier erected on a roof to warn workers that they are approaching an unprotected roof side or edge and that designates an area in which roofing work may take place without the use of a guardrail, personal fall protection or safety net system (§1926.500(b)).

¹³ The proposed rule general industry fall protection rule defines "designated area" as a distinct portion of a walking-working surface delineated by a perimeter warning line in which temporary work may be performed without additional fall protection (proposed §1910.21(b)).

whether there are specific or limited situations in your establishment or in shipyard employment where designated areas, warning line systems and/or CAZs may provide adequate protection (e.g., employees working on an elevated flat surface that is a distance from an unguarded edge or in the middle of a platform or deck). If so, in what work situations and at what distance from an unprotected edge should those fall protection alternatives be allowed and why? In what situations in shipyard employment would any of those fall protection alternatives not provide sufficient protection? To what extent would allowing the use of fall protection alternatives make it easier and less expensive for your establishment to protect workers from fall hazards?

c. Hoist areas. Part 1915 does not contain any fall protection requirements to protect employees working in elevated hoist areas. The construction standard and proposed general industry Walking-Working Surfaces rule require that workers in a hoist area or involved in hoisting activities be protected from fall hazards by guardrail systems, personal fall arrest systems or travel restraint systems (§1926.501(b)(3), proposed §1910.28(b)(2)). The construction and proposed general industry standards also specify that if guardrail systems (or chain, gate, or guardrail), or portions thereof, are removed to facilitate hoisting operations and employees must lean through or out over the access opening, they must be protected from fall hazards by a personal fall arrest system.

OSHA requests comment about an option of adopting into part 1915 the Proposed Rule's requirements to use personal fall arrest systems during hoist operations when workers may be exposed to fall hazards. OSHA requests comment on what fall protection your establishment uses (or should employers provide) when guardrail systems, or a portion, must be removed to permit hoisting or line handling activities.

d. Hole covers. The construction fall protection standard requires that all hole covers be color coded or marked with the word “HOLE” or “COVER” to provide warning of the hazard (§1926.502(i)(4)). Part 1915 does not have a similar requirement. Employers in shipyard employment frequently use pieces of plywood as covers with no mark to distinguish covered holes from debris.

OSHA requests comment about an option of adopting into part 1915 the construction provision that requires hole covers to be painted or otherwise clearly marked to indicate their function as a cover. OSHA requests comment on what your establishment and the shipyard employment industry does (or should employers use) to indicate the location of covered holes.

e. Dangerous equipment. Part 1915 does not contain any fall protection requirements to protect workers from falling on or into dangerous equipment. The construction and proposed general industry Walking-Working Surfaces rule fall protection standards require that employers protect workers from falling into or onto dangerous equipment by use of a guardrail, safety net, travel-restraint or personal fall arrest system (§1926.501(b)(8), proposed §1910.28(b)(6)).

OSHA requests comment about an option of adopting the Proposed Rule’s requirements for dangerous equipment into part 1915. What protection does your establishment use (or should employers provide) to protect workers from falling into or onto dangerous equipment? At what elevation/height above dangerous equipment does your establishment provide (or should employers provide) particular fall protection?

f. Fall protection on fixed ladders. Part 1915 does not include any fall protection requirements on fixed ladders. The existing general industry standard requires that fixed

ladders be equipped with cages or wells (§1910.27(d)(1)(ii)). The proposed general industry Walking-Working Surfaces rule gives employers the option of equipping fixed ladders with cages, wells, ladder-safety systems or personal fall arrest systems (proposed §1910.28(b)(9)).

During the public comment period and the informal public hearing on the Proposed Rule, a number of stakeholders said that cages and wells neither prevent workers from falling off fixed ladders nor protect them from injury when a fall occurs (e.g., Exs. OSHA-2007-0072-0113; OSHA-2007-0072-0155; OSHA-2007-0072-0185; OSHA-2007-0072-0198; OSHA-2007-0072-0329 (1/21/2011), pgs. 18-19, 259)). These stakeholders said cages and wells simply contain employees in the event of a fall and direct them to a lower landing rather than preventing them from hitting a lower level. They also said fixed ladder cages and wells may increase the severity of fall injuries. Therefore, they recommended that fixed ladders be equipped with ladder-safety systems or personal fall arrest systems. Part 1915 does not contain any specific fall protection requirements for fixed ladders.

OSHA requests comment about an option of adding a new requirement into part 1915 to equip new fixed ladders (except permanent fixed ladders on vessels or vessel sections) with personal fall arrest or ladder-safety systems to prevent falls. What type of fall protection equipment does your establishment use (or should employers provide) to protect workers from falling off fixed ladders? What type of fall protection does your establishment provide (or should employers provide) on new fixed ladders? What fall protection does your establishment use (or should employers provide) for workers

climbing fixed ladders on vessels/vessel sections? What would be the incremental cost to equip new fixed ladders with personal fall arrest systems or ladder-safety systems?

g. Falling object protection. The construction standard and proposed general industry Walking-Working Surfaces rule require that workers exposed to falling objects wear head protection and implement one or more of the following: toeboards; screens; guardrail systems; canopy structures to prevent objects from falling to a lower level and keeping objects far enough from an edge, hole or opening to prevent them from falling; or barricading the area in which objects could fall (§1926.501(c), proposed §1910.28(c)). Part 1915 requires that employers provide head protection to workers where such hazards exist (§1915.155(a)(1)), and install toeboards, when necessary, to prevent tools and materials from falling on workers below (§1915.71(j)(5)). However, part 1915 does not give employers the option of using screens, guardrail systems, canopy structures or barricades instead of installing toeboards.

OSHA requests comments about an option of adopting the Proposed Rule's requirements on falling object options into part 1915. Please discuss whether the flexibility of the Proposed Rule would make compliance easier and less expensive for shipyard employment employers. In addition to using toeboards to prevent objects from falling, what additional measures, if any, does your establishment use (or should employers provide) to prevent workers on a lower level from being hit by falling objects? Have workers at your establishment been killed or injured by falling objects? If so, please describe the circumstances and what falling object protection (e.g., toeboards, screens, canopies), if any, was used.

D. Subpart N - Scaffolds

As mentioned, OSHA adopted the part 1915 scaffold standards (§1915.71) in 1971 from established Federal and national consensus standards and the Agency has never updated them. Likewise, the Agency adopted the general industry scaffold standards (§§1910.28 and 1910.29) that same year and in the same manner, and also has not updated them.

In 1988, the Agency proposed to update the shipyard employment scaffold standards, but did not finalize the proposal because the Agency received only limited comment and information. Since then, OSHA has continued collecting information on fall protection and walking-working surfaces, such as scaffolds used in shipyard employment. In its most recent effort, OSHA surveyed a selected cross-section of shipyard employers in July 2013 regarding the types of scaffolds they and the shipyard employment industry use. OSHA surveyed two small shipyard (less than 100 employees) employers, three medium shipyard (100 – 500 employees) employers, and four large shipyard (500 or more employees) employers. The survey asked those employers the following five questions:

1. Of the existing shipyard employment scaffold requirements, which types of scaffolding systems are still used by the shipyard employment industry?
2. Which types of scaffolding systems are not used in the shipyard employment industry?
3. Are there any types of scaffolding systems currently used in shipyard employment that part 1915 standards do not address (e.g., marine hanging staging and systems scaffolding)?

4. What percentage of each type of scaffold system is used in the shipyard employment industry?

5. Is the shipyard employment industry complying with the scaffold rail height requirement (42 to 45 inches) in the shipyard employment scaffold standard (§1915.71(j)(1)) and would the construction standards' scaffold rail height requirement (38 to 45 inches) (§1926.451(g)(4)(ii)) provide adequate protection to prevent shipyard employment workers from falling off scaffolds?¹⁴

The survey results indicated that none of the employers use wood trestle or extension trestle ladders, and very few employers use independent pole wood scaffolds, painters' suspended scaffolds, or horse scaffolds. Most of the medium and large shipyards surveyed still use independent pole metal scaffolds, seven of nine employers use tubular welded frame scaffolds, and five employers use bricklayer's square scaffolds and bracket scaffolds.

The employers indicated that interior hung scaffolds (including marine hanging staging and float, or ship scaffolds) were the next most frequently used type of scaffolding, followed by mobile work platforms and systems, or modular scaffolding. Lastly, a few employers reported using outrigger scaffolds, aluminum joist beam scaffolds, power climbing scaffolds, tube and coupler scaffolds, and boatswain's chairs. Survey results regarding scaffold rail heights are discussed in section II-D-1-h.

OSHA did not find any clear trend on scaffold use among the medium and large shipyards, but noted those shipyards use system scaffolds and independent pole metal scaffolds more than other types of scaffolding in ship repair and shipbuilding operations.

¹⁴ ERG report, dated August 23, 2013, outlines the results from the July 2013 survey of the nine shipyard employers (Ex. 0002).

About one-half of the shipyard employers reported using aerial lifts and scissor lifts; however, only a couple of employers indicated they use personnel platforms suspended from cranes or derricks. A June 2013 survey of the Scaffold and Access Industry Association (SAIA) conducted among its members reported results comparable with that of the July 2013 survey.¹⁵

Although the survey information is based on a small cross-section of employers in shipyard employment, OSHA generally believes these employers are typical of the industry as a whole. OSHA requests comment on whether the survey results are typical of the shipyard employment industry. For example, to what extent and in what aspects are the survey results consistent with scaffolds your establishment uses? In addition, to develop the most complete information on scaffolds used in shipyard employment, OSHA requests that stakeholders answer the five survey questions noted above.

1. General Revisions

a. Construction scaffold standards. As mentioned, OSHA adopted the shipyard employment and general industry scaffold standards in 1971 and has not updated either one since then. In 2010, OSHA proposed to replace the existing general industry scaffold provisions with the requirement that employers must comply with the construction scaffold requirements (29 CFR part 1926, subpart L) (75 FR 28862 (5/24/2010)).

In the preamble to the proposed general industry Walking Working Surfaces rule, OSHA explained that adopting the construction scaffold standards would ensure regulatory consistency between the two industries, ease compliance for the many general industry employers who use scaffolds to perform both general industry and construction

¹⁵ Results of June 27, 2013, Scaffold and Access Industry Association (SAIA) member survey (Ex. 0003).

activities, and increase employer and worker understanding of applicable requirements (75 FR 28884). Moreover, since many general industry employers who use scaffolds also perform construction activities, OSHA said they already were familiar with the construction scaffold standards. In addition, OSHA noted that the construction scaffold requirements, which the Agency issued in 1996 (61 FR 46045 (8/30/1996)), were much more current than the general industry scaffold standards, adopted in 1971 from established Federal standards and national consensus standards and not updated since. Given that the construction scaffold standards contain requirements for the same scaffolds general industry uses, OSHA concluded that incorporating the construction standards into part 1910 would provide a seamless transition for achieving regulatory consistency.

OSHA requests comment on an option of adopting the construction scaffold standards into part 1915. To what extent would adopting construction scaffold standards make compliance easier for your establishment and the shipyard employment industry and make the standards easier for employers and workers to understand and follow? Please discuss whether any construction scaffold standards are not applicable to shipyard employment activities. If so, what activities and why?

b. Scaffold types – shipyard employment v. general industry and construction.

The shipyard employment scaffold standard includes requirements for five specific types of scaffolds (§1915.71(c) through (g)) and general requirements for “Other types of scaffolds” (§1915.71(h)). Part 1915 must be supplemented by the existing general industry scaffold provisions, which include requirements for more than 20 specific types

of scaffolds (§§1910.28 and 1910.29). The construction scaffold standards also contain requirements for more than 20 types of scaffolds (§1926.452) (see Table 1).

Table 1 – List Scaffolding Standards in Existing Parts 1915, 1926, and 1910

Shipyard Employment Scaffold Standards (29 CFR Part 1915, Subpart E)		Construction Scaffold Standards (29 CFR Part 1926, Subpart L)		General Industry Scaffold Standards (29 CFR Part 1910, Subpart D)	
1915.71(c)	Independent wood scaffolds	1926.452(a)	Pole scaffolds.	1910.28(b)	Wood pole scaffolds
1915.71(d)	Independent pole metal scaffolds	1926.452(b)	Tube and coupler scaffolds	1910.28(c)	Tube and coupler scaffolds
1915.71(f)	Painters suspended scaffolds	1926.452(p)	Two-point adjustable suspension scaffolds.	1910.28(g)	Two-point suspension scaffolds
1915.71(g)	Horse scaffolds	1926.452(f)	Horse scaffolds	1910.28(m)	Horse scaffolds
1915.71(e)	Wood trestle and extension trestle ladders	1926.452(n)	Step, platform, and trestle ladder scaffolds		
		1926.452(c)	Fabricated frame (tubular welded) scaffolds.	1910.28(d)	Tubular welded frame scaffolds
		1926.452(i)	Outrigger scaffolds	1910.28(e)	Outrigger scaffolds
		1926.452(q)	Multi-point adjustable suspension scaffolds, stone setters' multi-point adjustable suspension scaffolds, and masons' multi-point adjustable suspension scaffolds.	1910.28(h)	Stone setter's adjustable multipoint suspension scaffolds
				1910.28(f)	Masons' adjustable multi-point suspension scaffolds.
		1926.452(o)	Single-point adjustable suspension scaffolds.	1910.28(i)	Single-point adjustable suspension scaffolds
				1910.28(j)	Boatswain's chair
		1926.452(g)	Form scaffolds and carpenters' bracket scaffolds.	1910.28(k)	Carpenters' bracket scaffolds
		1926.452(e)	Bricklayers' square scaffolds.	1910.28(l)	Bricklayers' square scaffolds
		1926.452(u)	Needle beam scaffolds.	1910.28(n)	Needle beam scaffolds
		1926.452(d)	Plasterers', decorators', and large area scaffolds.	1910.28(o)	Plasterers', decorators', and large area scaffolds
		1926.452(t)	Interior hung scaffolds.	1910.28(p)	Interior hung scaffolds
		1926.452(k)	Ladder jack scaffolds	1910.28(q)	Ladder jack scaffolds
		1926.452(l)	Window-jack scaffolds	1910.28(r)	Window-jack scaffolds
		1926.452(h)	Roof bracket scaffolds	1910.28(s)	Roofing bracket scaffolds
		1926.452(m)	Crawling boards (chicken ladders)	1910.28(t)	Crawling boards or chicken ladders
		1926.452(s)	Float (ship) scaffolds	1910.28(u)	Float or ship scaffolds
		1926.452(w)	Mobile scaffolds	1910.29(e)	Mobile work platforms
		1926.452(r)	Catenary scaffolds		

OSHA requests information on what types of and how many scaffolds your establishment and the shipyard employment industry use and in what operations and locations (e.g., on decks, drydocks, vessels, vessel sections). To what extent does your establishment and the shipyard employment industry use (1) supported scaffolds (e.g.,

frame or fabricated scaffolds); (2) suspension scaffolds (e.g., single-point, two-point, multi-point suspension (swinging scaffolds)); and (3) mobile scaffolds (which are a type of supported scaffold set on wheels or casters)? Does your establishment or the shipyard employment industry use any types of scaffolds that the construction scaffolds standards cover, but not part 1915 or applicable general industry scaffold standards? What types of scaffolds, if any, does your establishment or the shipyard employment industry use that no OSHA standard covers? What additional or new scaffolding systems OSHA should consider covering if the Agency revises the shipyard employment scaffold standard?

c. Inspection of scaffolds. The shipyard employment scaffold standard requires that employers maintain scaffolds in safe condition and replace components that are damaged, broken or defective (§1915.71(b)(5)). However, it does not contain a scaffold inspection requirement (§1915.71). The construction scaffold standard requires employers to ensure that a competent person¹⁶ inspects scaffolds and their components for visible defects before each work shift and after any occurrence that could affect a scaffold's structural integrity (§1926.451(f)(3)). Examples of such occurrences include impact loadings caused by vehicles, hoists, extremely high winds; and other events that place heavy stress on the scaffold system.

OSHA requests comment about an option of adopting the construction scaffold inspection requirement into part 1915. What scaffold inspection practices and procedures does your establishment (or should employers) use to ensure scaffolds are safe for workers to use? How frequently does your establishment (or should employers) inspect

¹⁶ The construction scaffold standard defines a “competent person” as capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them (§1926.450(b)). Section 1915.4(o) similarly defines competent person.

scaffolds? What actions does your establishment (or should employers) take when an inspection identifies scaffold damage or deterioration? Also, what qualifications do employees performing the inspections possess? How much time does it take to inspect the scaffolds that your establishment uses?

d. Weather conditions. The shipyard employment scaffold standard does not contain any requirements addressing the use of scaffolds during hazardous weather conditions; therefore, the general industry scaffold requirements apply. The general industry standard prohibits employees from working on scaffolds during “storms or high winds” (§1910.28(a)(18)). Construction scaffold standards also prohibit employers from permitting employees to work on or from supported scaffolds during storms or high winds but allows an exception when (1) a competent person has determined that it is safe for workers to be on the scaffold; and (2) those employees are protected by a personal fall arrest system or wind screens (if the scaffold is secured against the anticipated wind forces) (§1926.451(f)(12)).

OSHA requests comment on an option of adopting the construction scaffold requirements on hazardous weather conditions into part 1915. To what extent would the added flexibility the construction scaffold standard provides make compliance easier and reduce costs while still providing the same level of protection as the applicable general industry scaffold requirement? What safety practices and procedures has your establishment and the shipyard employment industry implemented to ensure that employees working on or from scaffolds, particularly supported and suspension scaffolds, are protected from hazardous weather conditions? What weather conditions (e.g., high winds, thunderstorms, snow storms, lightening) do your safety practices and procedures

address? Do your practices/procedures prohibit work on certain types of scaffolds (e.g., suspended/suspension scaffolds) during storms and in high winds, and, if so, when is work prohibited and who makes that determination?

e. Erecting and dismantling scaffolds. The construction scaffold standards require that employers provide fall protection for workers erecting and dismantling supported scaffolds unless a competent person determines that the installation and use of fall protection (1) is not feasible; or (2) would create a greater hazard (§1926.451(g)(2)). The shipyard employment scaffold standard does not contain a requirement that specifically addresses the use of fall protection while erecting and dismantling scaffolds. However, the shipyard scaffold standard requires that employers ensure supported or suspended scaffolds more than 5 feet above a solid surface or water be equipped with railings (§1915.71(j)(1)). In addition, the shipyard employment PPE standard requires that employers provide personal fall protection equipment when a hazard assessment indicates there are hazards present, or likely to be present, that necessitate the use of PPE (§1915.152(a) and (b)).

OSHA requests comment on an option of adopting into part 1915 the construction scaffold requirements to provide fall protection when workers erect and dismantle supported scaffolds. What fall protection does your establishment and the shipyard employment industry use to protect workers from falling while erecting and dismantling supported scaffolds? Please explain whether there are any type(s) of supported scaffolds or any situations (e.g., work conditions, restrictions, unique hazards) where it is impossible for your establishment or the shipyard employment industry to use fall protection while erecting/dismantling scaffolds. If fall protection is impossible to use in

a specific situation, please explain what alternative measures your establishment and the shipyard employment industry use to protect workers from falls.

f. Front edge distance. The construction scaffold standards require that the front edge of scaffold platforms be no more than 14 inches from the “face of the work” (e.g., vessel/vessel section, building, structure), unless the employer (1) installs a guardrail system along the front edge, and/or (2) provides and ensures workers use a personal fall arrest system (§1926.451(b)(3)). The shipyard employment scaffold standard does not contain a specific front edge distance requirement, but it requires:

- Employees to be protected by a personal fall arrest system where scaffold rails are not installed on scaffolds that are more than five feet above a solid surface (§1915.71(j)(3));
- Employees to be protected from falling toward the vessel by use of a railing or personal fall arrest system that is attached to the backrail when working from swinging scaffolds that are triced out of vertical line with their supports (§1915.71(j)(4)); and
- Employees to be protected from falling toward the vessel by use of a railing or personal fall arrest system that is attached to the backrail when working from scaffolds on paint floats subject to surging (§1915.71(j)(4)).

OSHA seeks public comment on an option of adopting into part 1915 the construction scaffold requirement on front edge distance. What safety practices or rules does your establish and shipyard employment industry have to ensure that workers are protected from falling off the front edge of scaffold platforms? Please explain whether your practices/rules specify a maximum space that is permitted between the front edge

and the face of the work (e.g., vessel/vessel section) and, if so, what is the maximum distance and why.

g. Fall protection height. Part 1915 requires that employers ensure their employees working on any supported or suspended scaffold five feet or more above a solid surface are protected from falling to a lower level (§1915.71(k)(1)). The construction scaffold standards, on the other hand, require that any employee working on a scaffold more than 10 feet above a lower level be protected from falling to that lower level (§1926.451(g)(1)).

OSHA requests comment on an option of adopting the 10-foot fall protection height requirement in the construction scaffold standards into part 1915, which would make the shipyard employment and construction scaffold standards consistent. Please discuss whether the added flexibility the construction scaffold standards provide would make compliance easier and less expensive for shipyard employment employers while still providing adequate fall protection for employees working on scaffolds. At what height does your establishment provide fall protection when workers perform construction activities on scaffolds above a solid surface and why?

h. Scaffold rail height. The shipyard employment scaffold standard requires that the height of scaffold top rails be 42 to 45 inches (§1915.71(j)(1)). By contrast, the construction scaffold standards require that scaffolds manufactured or placed into service after January 1, 2000, have a top-rail height of between 38 to 45 inches (§1926.451(g)(4)(ii)). The construction standards also specify that the top-rail height of scaffolds manufactured or put into service before January 1, 2000, must be between 36 to 45 inches. Also, in some cases,

the construction standards permit scaffold top rails to exceed 45 inches “[w]hen conditions warrant.”

The July 2013 survey of a cross section of employers in shipyard employment also asked the employers about scaffold top-rail heights. Five employers said they comply with the scaffold rail height requirement in §1915.71, while three employers indicated their shipyards were not in compliance. Two employers did not indicate whether their shipyards comply with the §1915.71 scaffold rail height requirement, but said they support allowing shipyard employment establishments to comply with the construction rail height requirement.

Three employers support retaining the existing rail height requirement in §1915.71, stating that a lower rail height would not adequately protect workers. However, the other six employers support allowing a scaffold rail height of 38 to 45 inches. Four employers pointed out that some types of system scaffolds do not comply with §1915.71(j)(1). As a result, employers would have to modify the rails on those scaffolds, which they claimed would potentially compromise worker safety.

Finally, one employer said there were three problems with requiring that employers meet scaffold rail height requirements of part 1915 when performing work on vessels. First, the employer said guardrails permanently installed on many vessels are 38 inches high. Second, the employer said many employers and contractors that work in shipyards also perform construction work and often have difficulty transitioning between the different scaffold rail heights required by the shipyard employment and construction standards. Finally, the employer claimed that there is no proof that scaffold rails that are 42 to 45

inches high provide greater protection than rails that are less than 42 inches, but at least 38 inches high.

OSHA requests comment about an option of adopting the construction scaffold rail height requirement (38 to 45 inches) into part 1915. Please discuss whether the added flexibility that the construction scaffold rail height requirement provides would make compliance easier and less expensive for shipyard employment employers while still providing adequate fall protection for employees working on scaffolds. What rail heights do your establishment and the shipyard employment industry typically use on various types of scaffolds? Are there types of scaffolds your establishment or the shipyard employment industry uses for which OSHA should retain the current scaffold rail height requirement in §1915.71 and if so, which scaffold types?

2. Specific Revisions

a. Marine hanging staging (MHS). In the 1988 proposal (53 FR 48092) and 1994 record reopening (59 FR 17290), OSHA requested comment on the use of marine hanging staging (MHS) scaffold systems in shipyard employment, which were new to the industry at that time. OSHA received few comments and did not finalize the proposal. In April 2005, OSHA published a guidance document titled “Safe Work Practices for Marine Hanging Staging (MHS),” and a web-based guidance tool (eTool) on MHS in February 2011. OSHA’s guidance materials included safety practices from the American National Standards Institute (ANSI)/American Society of Safety Engineers (ASSE) A10.8-2011 Scaffolding Safety Requirements standard (A10.8-2011) and best practices such as job hazard analysis, system key-components (e.g., anchorage and attachments, strut connections, planking) and loading characteristics.

OSHA requests comment on an option to adopt provisions from the OSHA guidance documents and the A10.8 standard into part 1915. To what extent has your establishment and the shipyard employment industry implemented provisions and requirements from those documents? What provisions from the OSHA guidance and A-10.8 standard has your establishment and the shipyard employment industry found to be particularly effective to protect workers using MHS? To what extent does your establishment or the shipyard employment industry use MHS and in what operations and locations?

b. Mobile scaffolds. Part 1915 does not contain any requirements on mobile scaffolds. The existing general industry scaffold standard, which applies on vessels and on shore for shipyard employment, includes provisions on manually propelled mobile scaffolds (towers) (§1910.29(a)).

In addition to moving mobile scaffolds manually, the construction scaffold standards address the movement of mobile scaffolds by way of “power systems” (§1926.452(w)(4)). This provision states that power systems must be designed for such use, and specifically prohibits using forklifts, trucks, similar motor vehicles or add-on motors to move mobile scaffolds “unless the scaffold is designed for such propulsion systems” (§1926.452(w)(4)).

OSHA requests comment about an option of adopting into part 1915 the construction requirements for mobile scaffolds. To what extent does your establishment and the shipyard employment industry use mobile scaffolds and in what operations and locations? To what extent does your establishment and the shipyard employment industry move mobile scaffolds with (1) “power systems;” and (2) manually? What types

of mobile scaffolds that your establishment uses are designed to be moved by a power/propulsion system and what types are not? For both types of mobile scaffolds, what measures do you take (or should employers take) to ensure the safety of employees working on or near them?

c. Securing suspended/suspension scaffolds. Part 1915 does not include any specific requirements for securing suspension/suspended scaffolds (e.g., painters' suspended scaffolds, two-point adjustable suspension scaffolds), and the use of this equipment is governed by the general industry provisions. The existing general industry standard requires that two-point suspension scaffolds and single-point adjustable suspension scaffolds must be securely lashed to the building or structure to prevent the scaffold from swaying (§1910.28(g)(11)).

The construction scaffold standards require that employers take the same measures as the general industry standard when it is “determined to be necessary based on an evaluation by a competent person” (§1926.451(d)(18)). Both standards prohibit employers from using “window cleaner’s anchors” to secure scaffolds (§§1910.28(g)(11), 1926.451(d)(18)).

OSHA requests comment on the types of suspension/suspended scaffolds (e.g., two-point suspension scaffolds, single-point adjustable suspension scaffolds, boatswain’s chairs) your establishment and the shipyard employment industry use and in what operations and locations. Also, OSHA requests comment on an option of adopting the construction scaffold requirement to secure suspension/suspended scaffolds into part 1915. Please explain whether the added flexibility and consistency the construction scaffold standards would provide would make compliance easier while still ensuring

workers are protected from injury due to swaying scaffolds. What equipment or measures does your establishment and shipyard employment industry use to secure suspension/suspended scaffolds from swaying? What factors does your establishment consider in determining whether securing a particular scaffold is necessary and who makes that determination?

d. Rope descent systems. The proposed general industry Walking Working Surfaces rule allows employers to use rope descent systems (RDS) (proposed §1910.27(b)). An RDS is a suspension system that allows a worker to descend in a controlled manner and, as needed, stop at any point during the descent to perform work activities (proposed §1910.21(b)). It generally consists of a roof anchorage support rope, descent device, carabiner (s) or shackle(s), and a chair or seatboard. An RDS also is called a controlled descent system or equipment. A boatswains' chair is similar to an RDS except it can descend and ascend. Part 1915 does not contain requirements for the use of RDS or similar equipment.

OSHA requests comment on an option of adopting the Proposed Rule's RDS provisions into part 1915. To what extent does your establishment and the shipyard employment industry use RDS or similar equipment (controlled descent systems, mechanical lowering devices, boatswains' chairs) and in what operations and locations? If they are used, at what heights do your establishment and the shipyard employment industry (or should shipyard employment employers) use RDS? What practices or procedures do you follow (or should employers follow) to protect employees using RDS or similar equipment? Please describe whether the added flexibility and consistency the proposed general industry RDS provisions would make compliance easier, increase

productivity and result in costs savings while still ensuring workers are protected from injury while performing elevated work.

e. Stilts. Part 1915 and general industry standards do not include any provisions addressing the use of stilts on scaffolds. The construction scaffold standards, however, establish requirements on the use of stilts on scaffolds and their maintenance (§§1926.452(y)).

OSHA requests comment on an option of adopting the construction stilt requirements into part 1915. To what extent do your establishment and the shipyard employment industry use stilts on scaffolds and on what types of scaffolds and in what operations? What safety practices and procedures do your establishment and the shipyard employment industry have to keep workers safe while using stilts on scaffolds?

E. Outdated Requirements and Technological Advances

OSHA is aware that some requirements in subpart E are outdated and/or insufficient in their coverage of shipyard employment hazards. For example, subpart E contains requirements for scaffold systems that the shipyard employment industry no longer uses, such as pole wood scaffolds and horse scaffolds. Conversely, subpart E does not address marine hanging staging (MHS)/interior hung (or suspended) scaffolds, even though they are commonly used in the shipyard employment. Subpart E also contains outdated terminology, such as “safety belts” (body belts) and “moused” (moussing hooks) (§§1915.71(b)(10) and (j)(3), 1915.77(c)). Since 1998, OSHA has prohibited the use of safety belts in personal fall arrest systems under the construction fall protection standard and part 1915 personal fall arrest system standard (§§ 1915.159 and 1926.502(d)). The Agency requests that stakeholders identify outdated requirements and

terminology in subpart E and provide recommendations on revising and updating those provisions.

OSHA also requests comment on what technological advances on access/egress, fall and falling object protection, and scaffolds you and the shipyard employment industry are using or are available. What do these new technologies cost and has their use resulted in any cost savings, increases in productivity and/or reductions in worker injuries and fatalities?

III. Economic Impacts

The Agency requests data and information from industry on potential economic impacts if OSHA decides to revise and update the standards in Subpart E. When responding to the questions in this RFI, OSHA requests, whenever possible, that stakeholders discuss potential economic impacts in terms of:

- Quantitative benefits (e.g., reductions in injuries, fatalities, and property damage);
- Costs (e.g., compliance costs or decreases in productivity); and
- Offsets to costs (e.g., increases in productivity, less need for maintenance and repairs).

OSHA also invites comment on any unintended consequences and consistencies or inconsistencies with other policies or regulatory programs that might result if OSHA revises the standards in subpart E.

OSHA welcomes all comments but requests that stakeholders discuss economic impacts in as specific terms as possible. For example, if a provision or policy change would necessitate additional employee training, it is most helpful to OSHA to receive information on the following:

- The training courses necessary;
- The types of employees who would need training and what percent (if any) of those employees currently receive the training;

- The length and frequency of training;
- The topics training would cover;
- Any retraining necessary; and
- The training costs if conducted by a third-party vendor or in-house trainer.

For discussion of equipment related costs, OSHA is interested in all relevant factors including:

- The prevalence of current use of the equipment;
- The purchase price;
- Cost of installation and training;
- Cost of equipment maintenance and upgrades; and
- Expected life of the equipment.

The Agency also invites comment on the time and level of expertise required if OSHA were to implement potential changes this RFI discusses, even if dollar-cost estimates are not available.

The Regulatory Flexibility Act (5 U.S.C. 601, as amended) requires that OSHA to assess the impact of proposed and final rules on small entities. OSHA requests comment, information and data on the following inquiries:

1. How many and what kinds of small businesses or other small entities in shipyard employment could be affected if OSHA decides to revise provisions in Subpart E?

Describe any such effects. Where possible, please provide detailed descriptions of the

size and scope of operation for affected small entities and the likely technical, economic and safety impacts for those entities. In the final rule on General Working Conditions in Shipyard Employment (76 FR 24666 (5/2/2011)) (“Subpart F”) industry profile OSHA estimated that all establishments with 100 or more employees are shipyards; that about 73 percent of establishments with 20-99 employees are contractors who work at shipyards or off-site establishments that perform shipyard employment operations; and that all very small establishments with fewer than 20 employees are contractors or off-site establishments. OSHA requests comment on whether those estimates still reflect the industry today? In the Subpart F final rule OSHA also assumed that most small and all very small establishments in NAICS 336611 (Ship Building and Repairing) are contractors working at shipyards, and are not themselves shipyards. These contract employers, in most cases, will not incur the full cost of compliance due to either their adherence to the host employer’s programs or the type of work they perform at shipyards. Is this assumption and conclusion still reasonable?

2. Are there special issues that make the control of fall hazards more difficult in small firms?

3. Are there any reasons that the benefits of reducing exposure to hazards associated with access/egress, scaffolds, and fall protection might be different in small firms than in larger firms? Please describe any specific concerns related to potential impacts on small entities that you believe warrant special attention from OSHA. Please describe alternatives that might serve to minimize those impacts while meeting the requirements of the OSH Act.

IV. Public Participation

OSHA invites interested persons to submit information, comments, data, studies, and other materials on the issues and questions in this RFI. In particular, throughout this RFI OSHA has invited comment on specific issues and requested information and data about practices at your establishment and other workplaces in shipyard employment. When submitting comments to questions or issues raised or revisions to subpart E that OSHA is considering, OSHA requests that the public explain their rationale and, if possible, provide data and information to support their comments and recommendations.

You may submit comments in response to this RFI (1) electronically at <http://www.regulations.gov>, (2) by hard copy, or (3) by facsimile (FAX). All comments, attachments, and other materials must identify the Agency name and the docket number for this document (Docket No. OSHA–2013–0022). You may supplement electronic submissions by uploading document files electronically. If, instead, you wish to provide a hardcopy of additional materials in reference to an electronic submission, you must submit them to the OSHA Docket Office (see ADDRESSES section). The additional materials must clearly identify your electronic submission by name, date, and docket number so OSHA can attach them to your comments.

Because of security-related problems there may be a significant delay in the receipt of comments by regular mail. For information about security procedures concerning the delivery of materials by express delivery, hand delivery and messenger or courier service, please contact the OSHA Docket Office (see ADDRESSES section).

All comments and submissions in response to this RFI, including personal information, are placed in the public docket without change. Therefore, OSHA cautions against submitting certain personal information such as social security numbers and

birthdates. All comments and submissions are listed in the <http://www.regulations.gov> index; however, some information (e.g., copyrighted material) is not publicly available to read or download through that website. All comments and submissions are available at the OSHA Docket Office. Information on using <http://www.regulations.gov> to submit comments and access dockets is available at that website. Contact the OSHA Docket Office for information about materials not available through that website and for assistance in using the website to locate and download docket submissions.

Electronic copies of this Federal Register document are available at <http://www.regulations.gov>. This document, as well as news releases and other relevant documents, are also available at OSHA's website at <http://www.osha.gov>.

Authority and Signature

David Michaels, Ph.D., MPH, Assistant Secretary of Labor for Occupational Safety and Health, directed the preparation of this document under the authority granted by 29 U.S.C. 653, 655, and 657; 33 U.S.C. 941; 29 CFR part 1911; and Secretary's Order 1-2012 (77 FR 3912).

Signed at Washington, DC, on August 31, 2016.

David Michaels,
Assistant Secretary of Labor for Occupational Safety and Health.

BILLING CODE 4510-26-P

[FR Doc. 2016-21369 Filed: 9/7/2016 8:45 am; Publication Date: 9/8/2016]